

CLAIMS

1. A mammalian cell culture medium comprising:
 - (i) at least one IGF selected from IGF-I and IGF-II; and
 - (ii) an absence of serum or an amount of serum which in the absence of
- 5 said at least an IGF would not support cell growth.
2. The mammalian cell culture medium of Claim 1, wherein serum is absent or present to a concentration no more than 1% (v/v).
3. The mammalian cell culture medium of Claim 2, wherein serum is present to a concentration no more than 0.5% (v/v).
- 10 4. The mammalian cell culture medium of Claim 3, wherein serum is present to a concentration no more than 0.1% (v/v).
5. The mammalian cell culture medium of Claim 1, wherein serum is absent.
6. The mammalian cell culture medium of Claim 1, wherein the IGF is IGF-II.
7. The mammalian cell culture medium of Claim 1, wherein the IGF is IGF-I.
- 15 8. The mammalian cell culture medium of Claim 7, further comprising an IGFBP selected from the group consisting of IGFBP1, IGFBP2, IGFBP3, IGFBP4, IGFBP5 and IGFBP6.
9. The mammalian cell culture medium of Claim 8, wherein the IGFBP is selected from the group consisting of IGFBP3 and IGFBP5.
- 20 10. The mammalian cell culture medium of Claim 9, wherein the IGFBP is IGFBP5.
11. The mammalian cell culture medium of Claim 1, further comprising vitronectin (VN) or a fragment thereof.
12. The mammalian cell culture system of Claim 11, wherein the VN fragment
- 25 does not comprise a heparin binding domain (HBD).
13. The mammalian cell culture system of Claim 12, wherein the VN fragment comprises a polyanionic region.
14. The mammalian cell culture system of Claim 13, wherein the VN fragment is capable of binding an integrin receptor selected from an $\alpha_v\beta_3$ integrin or an $\alpha_v\beta_5$
- 30 integrin.
15. The mammalian cell culture system of Claim 11, wherein vitronectin (VN) is purified autologous vitronectin (VN).

16. The mammalian cell culture medium of Claim 1 comprising IGF-I, and IGFBP and vitronectin in the form of an isolated protein complex.
17. The mammalian cell culture medium of Claim 1 comprising IGF-II and
5 vitronectin in the form if an isolated protein complex.
18. The mammalian cell culture medium of Claim 6 or Claim 17, wherein the isolated protein complex is a synthetic chimeric protein.
19. The mammalian cell culture medium of Claim 1, further comprising EGF and/or bFGF.
- 10 20. A mammalian cell system comprising a culture vessel and the mammalian cell culture medium of any one of Claims 1-19.
21. The mammalian cell culture system of Claim 20, comprising vitronectin and/or fibronectin, or a fragment thereof, immobilized, bound or otherwise associated with the culture vessel.
- 15 22. A method of cell culture including the step of culturing the one or more cells in the mammalian cell culture system of Claim 20 or Claim 21.
23. The method of Claim 22, wherein feeder cells are absent for at least part of the duration of culture.
24. The method of Claim 22, wherein the one or more cells are epithelial cells.
- 20 25. The method of Claim 24, wherein the one or more cells are keratinocytes or keratinocyte progenitors.
26. The method of Claim 24, wherein the one or more cells are corneal cells.
27. A pharmaceutical composition for aerosol delivery of keratinocytes or keratinocyte progenitor cells comprising one or more keratinocytes cultured
25 according to the method of any one of Claims 22-26 together with a pharmaceutically acceptable carrier, diluent or excipient.
28. The pharmaceutical composition of Claim 27, further comprising a propellant.
29. The pharmaceutical composition of Claim 28, further comprising a fibrin glue.
- 30 30. The pharmaceutical composition of Claim 29, further comprising at least an IGF selected from IGF-I and IGF-II.

31. The pharmaceutical composition of Claim 29, wherein IGF-I and/or IGF-II are present in an isolated protein complex.

32. A method of delivering keratinocytes or keratinocyte progenitor cells for skin regeneration *in situ* including the step of spraying the pharmaceutical composition of
5 any one of Claims 27-31 onto the skin of an individual to facilitate skin regeneration.

33. The method of Claim 32, further including the step of growing said keratinocytes or keratinocyte progenitor cells to form regenerated skin *in situ*.